54914

REPORT ON INSPECTION TO DETERMINE COMPLIANCE WITH THE FEDERAL PCB DISPOSAL AND MARKING REGULATIONS

AEROVOX INDUSTRIES, INC.
740 BELLEVILLE AVENUE
NEW BEDFORD, MASSACHUSETTS 02741

JUNE 18, 1981

PERFORMED FOR:

U.S. ENVIRONMENTAL PROTECTION AGENCY
ENFORCEMENT DIVISION, AIR COMPLIANCE
1 CAMBRIDGE STREET
JFK FEDERAL BUILDING
BOSTON, MASSACHUSETTS 02741

PERFORMED BY:

VERSAR INC.
6621 ELECTRONIC DRIVE
SPRINGFIELD, VIRGINIA 22151

Objective

The purpose of this inspection was to document and verify the compliance of Aerovox Industries, Inc. with Federal PCB Disposal and Marking Regulations (40 CFR 761) published in Part VI of the Federal Register on May 31, 1979. The specific objective of this inspection was to document and verify the PCB disposal and storage practices at this facility.

I. Facility and Responsible Official

Aerovox Industries, Inc.
740 Belleville Avenue
New Bedford, Massachusetts 02741

Norman Butterworth, Manager, Industrial Engineering
Phone: (617) 944-9661

II. Inspection Date and Participants

June 18, 1981

Aerovox Industries, Inc. - Clifford H. Tuttle, Jr., President
Norman Butterworth, Manager, Industrial Engineering

U.S. EPA - Jim Oakun, Environmental Scientist
Steven Fradkoff, Environmental Engineer

Versar Inc. - Robert F. Murphy, Compliance Auditor
Paul E. Schaffman, Compliance Auditor

III. Inspection Findings

According to the facility PCB Annual Reports, and based on inspection of the plant, there were four PCB transformers, and an unknown number of mineral oil transformers in service at Aerovox Industries, Inc. There were also three PCB capacitors stored for reuse. The facility has purchased millions of pounds of PCB Aroclor from Monsanto in the past (See Attachments 1 and 2). The NPDES water discharges, the former PCB impregnation tanks, and the capacitor casing degreasing operation were all investigated during the inspection.

All four of the PCB transformers, and five mineral oil transformers were observed by the inspectors and are described in Table 1. The facility is in the process of reclassifying three of its PCB transformers by refilling the transformers with RTEmp fluid and filtering the fluid for residual PCBs, using an EPAC filter system. The two General Electric PCB transformers, which have been using the EPAC filtering system since 2/15/81, do not have the M_L PCB labels affixed to them. These transformers have not been tested for PCB concentration since the EPAC system commenced operation. The third transformer which is using the EPAC filter system, is a Westinghouse transformer, and it has an M_L PCB label affixed. According to the most recent PCB Annual Report for the facility, the fourth PCB transformer is located in the backyard substation (See Figure 1). The nameplate of this elevated transformer could not be read to verify whether it was a PCB transformer, and the unit was not marked with the M_L PCB label (See Table 1 and Attachment No. 4).

There were three Cornell-Dubilier large, high-voltage PCB capacitors in the machine shop on the third floor of the main manufacturing building. Mr. Butterworth stated that these units are stored for reuse in electrical equipment. All three were marked with M_L PCB labels and were not leaking. According to Mr. Butterworth, there are no PCB capacitors remaining at this facility from the previous PCB capacitor manufacturing operations. Aerovox discontinued the manufacture of PCB capacitors in October 1978.

Aerovox Industries, Inc. is using dioctyl phthalate (DOP) as a substitute for Askarel in many of their new capacitors. An oil sample was collected from Impregnation Tank No. 3, from which capacitors were currently being filled with DOP. No PCB contamination was detected (See Table 2). In the past, capacitors were filled with Askarel that was stored in this same impregnation tank. No PCB testing results could be furnished by Mr. Butterworth regarding the PCB concentration of the fluids in the impregnation tanks, or bulk DOP storage tanks, since the PCB fluid was removed from the system.

Aerovox Industries, Inc. had previously purchased millions of pounds of Aroclor from Monsanto for use in their capacitors. Based on a PCB mass balance for 1971-1975, as presented in Attachment No. 2, small amounts of

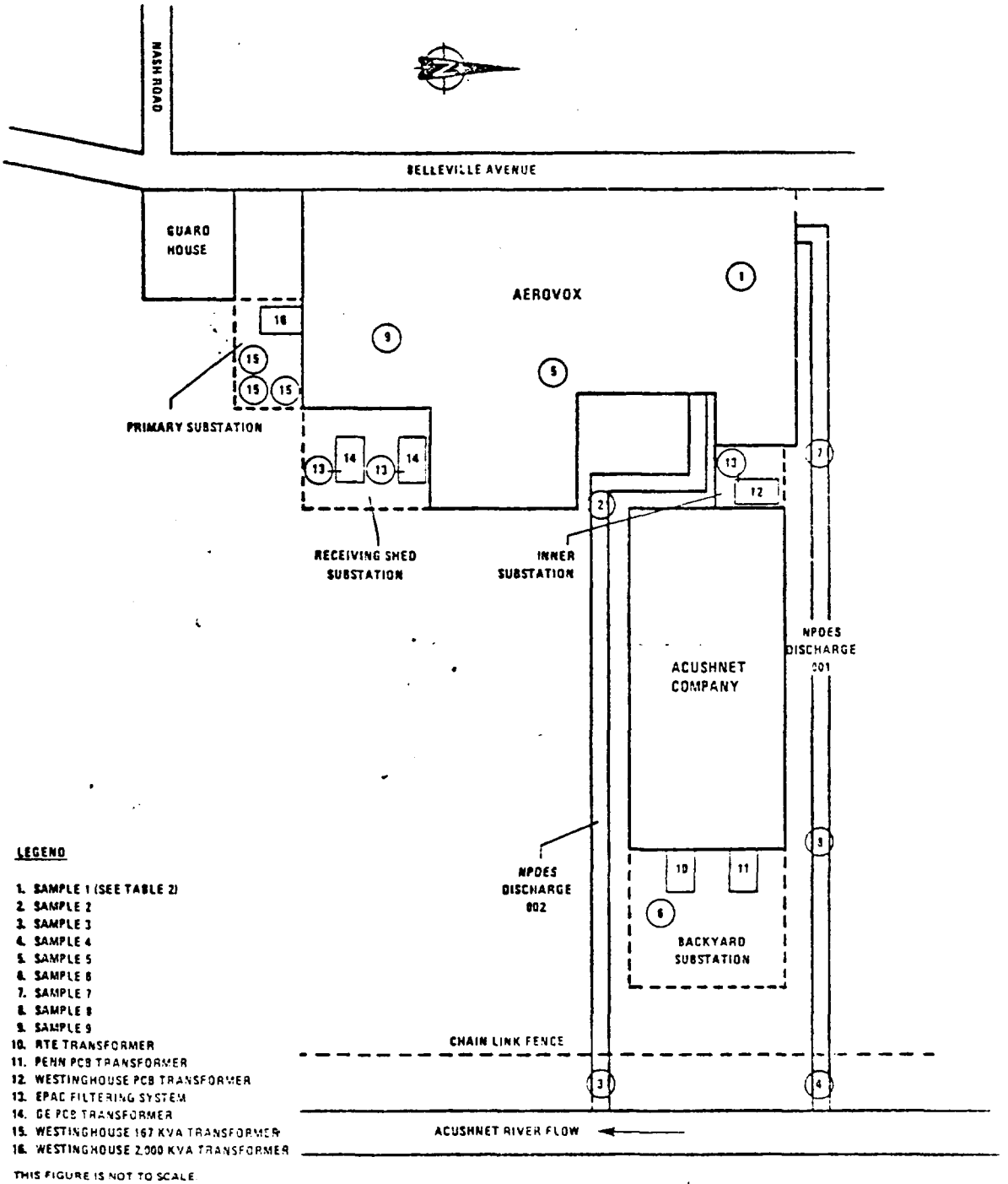


FIGURE 1. SCHEMATIC OF AEROVOX INDUSTRIES, INC., NEW BEDFORD, MASSACHUSETTS

TABLE 1. TRANSFORMERS INSPECTED AT AEROVOX INDUSTRIES, INC.

Type	Rating (kva)	Substation	Fluid	PCB Label	Gallons
Westinghouse	2,000	Primary	Mineral Oil	No	790
Westinghouse	167	Primary	Mineral Oil	No	-
Westinghouse	167	Primary	Mineral Oil	No	-
Westinghouse	167	Primary	Mineral Oil	No	-
General Electric	500	Receiving	Pyranol/R-Temp	No	192
General Electric	500	Receiving	Pyranol/R-Temp	No	192
Pennsylvania	500	Backyard	PCB (?)	No	-
RTE	500	Backyard	Mineral Oil	No	225
Westinghouse	57	Inner	Inerteen/R-Temp	Yes	91

TABLE 2. DESCRIPTION OF PCB SAMPLES COLLECTED AT AEROVOX INDUSTRIES, INC. NEW BEDFORD, MASSACHUSETTS

Sample Number	Description	PCB Concentration (ppm)	Aroclor Type
1	Oil from DOP impregnation tank	<1	---
2	Soil from culvert 002	200	1254
3	Soil from Outfall 002	22,000	1254
4	Soil from Outfall 001	40	1242
5	Oil from TCE (still bottoms)	170	1242
6	Soil from stained ground in backyard substation	24,000	1254
7	Soil from culvert 001 (upstream)	11,000	1242
8	Soil from culvert 001 (downstream)	23,000	1242
9	Oil from drum of waste DOP	<1	---

PCBs have been discharged through the two NPDES outfalls (001 and 002) into the Acushnet River. Aerovox Industries, Inc. has installed a water recirculation system at their plant, and now rarely discharge effluent, and when, only through Outfall 001. Acushnet Company leases property from Aerovox Industries, Inc., and currently contributes almost all of the effluent water which leaves the Acushnet facility through Outfall 002. Oil-impregnated soil was observed in the culverts leading to and at both outfalls (See Photographs in Attachment B). Five soil samples were collected associated with Outfalls 001 and 002. Locations are shown in Figure 1 and the PCB analytical results are reported in Table 2. PCB analytical results of these five sampling points range from 40 ppm to 23,000 ppm PCB Aroclor 1242.

A soil sample was collected from a stained area in the backyard power substation (See Photograph No. 5). A concentration of 24,000 ppm PCBs was found in this sample (See Table 2). According to Mr. Oakum of the U.S. EPA, this area was used for drum storage within the last month.

Aerovox Industries, Inc., had a capacitor casing degreasing operation utilizing trichloroethylene (TCE) as the degreasing solvent. Degreasing residues (still bottoms) from this process are stored in 55-gallon drums in an undiked room which has a concrete floor. Three full 55-gallon drums with black on red hazardous waste labels, but no M$_L$ PCB labels, were observed in this storage area. An oil sample collected from one of these drums revealed a PCB concentration of 170 ppm (Table 2). According to Mr. Butterworth, the facility generates approximately one drum per week, and disposes of the drums through Recycling Industries. Mr. Butterworth also stated that Aerovox Industries, Inc. occasionally collects composite samples from these drums, and tests them for PCBs. PCB concentrations in excess of 50 ppm have been found. Mr. Butterworth did not furnish the inspectors with prior sample analyses for PCB testing from this degreasing process.

The waste oil storage area was located in the basement of the Main Manufacturing Building at Aerovox Industries, Inc. (See Figure 1). Approximately twenty 55-gallon drums of non-reclaimable DOP and compressor oils are stored for disposal on pallets above a cement floor. All of the drums have the black on red hazardous waste labels affixed. The area is

not diked, and there are no M_L PCB labels on the drums. A sample from one of the drums, which contained non-reclaimable DOP, was collected and showed no PCB contamination (Table 2).

The facility has a 14 x 14 foot PCB storage area, with a six-inch concrete curb containment wall, and a concrete floor. No PCB articles were in the storage area at the time of the inspection. The storage area was marked with the M_L PCB label. Most of the PCB articles previously in storage at Aerovox Industries, Inc., have been hauled to Recycling Industries, Inc., in Braintree, Massachusetts, where they are being stored and are awaiting disposal at an approved site. A disposal invoice for Aerovox Industries, Inc. is shown in Attachment No. 5. The previous disposal of a PCB transformer on 12/28/79, and the separate disposal of its 1750 kgs of PCB fluid, are explained on Page 2 of Attachment No. 4.

Aerovox Industries, Inc. had PCB annual documents for the 7/1/78 to 7/1/79, and 7/1/79 to 7/1/80 reporting years (See Attachments 3 and 4). These annual documents pertain only to electrical equipment and are not summarized on a standard calendar year basis.

According to Mr. Butterworth, there were no hydraulic systems which contain more than one quart of hydraulic fluid at Aerovox Industries, Inc. and that press machines were electric-powered at this facility.

IV. Facility Description

Aerovox Industries, Inc., is a capacitor manufacturer, which produces paper, paper oil, electrolytic and mica capacitors. The facility manufactured PCB capacitors from 1947 to 1978. The plant employs approximately 850 people, and is in operation 24 hours a day, seven days a week. Presently, Aerovox Industries, Inc. leases some of their property to Acushnet Company for their own capacitor manufacturing operation.

The site of the present plant was formerly a textile mill since 1921. In 1938, Aerovox Corporation bought the plant and moved its capacitor operations from New York City to New Bedford. On January 1, 1973, the facility was sold to Belleville Industries, Inc., which subsequently changed its name to Aerovox Industries, Inc. This facility is NOW a subsidiary of RTE Corporation of Waukesha, Wisconsin.

V. Inspection Summary

The inspectors arrived at the facility accompanied by the EPA personnel on the morning of June 18, 1981, and met Mr. Tuttle, and Mr. Butterworth. Mr. Tuttle was presented with the inspectors' credentials, a "Notice of Inspection" and a "Notice of Confidentiality." Mr. Tuttle signed both notices and returned them to the inspectors. The EPA personnel seeing that the inspectors had no problem with entry, left the facility.

The inspectors commenced their visual inspection of Aerovox Industries, Inc. at the capacitor fluid-filling operation, where they collected an oil sample from Impregnation Tank No. 3. The inspection team next stepped outside where they sampled and photographed NPDES Outfalls 001 and 002, as well as culvert 002. The inspectors proceeded to inspect the PCB transformers at the facility and documented their findings in Table 1 of this report. The inspection team moved to the TCE still bottoms drum storage area, where they collected an oil sample from one of the drums. The inspectors again stepped outside and proceeded to collect two soil samples from culvert 001. Finally, the waste oil storage area and the PCB storage area were inspected and documented.

The inspectors returned to Mr. Butterworth's office and presented him with a "Receipt for Samples and Documents." He signed the receipt and returned it to the inspectors. The inspectors requested copies of PCB sampling analyses for the TCE degreasing operation, and the former PCB filling operation. Mr. Butterworth said he would try to obtain copies of these analyses and mail them to the inspectors. To date this information has not been received.

LIST OF ATTACHMENTS

AEROVOX INDUSTRIES, INC.
740 BELLEVILLE AVENUE
NEW BEDFORD, MASSACHUSETTS 02741

JUNE 18, 1981

ATTACHMENTS:

A. PCB Analytical Report
B. Photographs
C. Notice of Inspection
D. Notice of Confidentiality
E. Receipt for Samples and Documents
F. Chain of Custody Record

ATTACHMENTS OBTAINED FROM FACILITY:

1. Letter to EPA explaining prior PCB usage at Aerovox Industries, Inc. (3 pages)
2. PCB Purchase and Disposal Chart for 1971-1975 (1 page)
3. PCB Annual Report for 7/78 - 7/79 (3 pages)
4. PCB Annual Report for 7/79 - 7/80 (3 pages)
5. PCB Disposal Invoice for 11/14/80 (1 page)

ATTACHMENT A

Versar Inc.

PCB ANALYTICAL REPORT

PREPARED FOR: Mr. Jon Byroade

REF. # 717.7

Facility Inspected AEROVOX INDUSTRIES, INC.

SAMPLE NO.	LAB NO.	CONCENTRATION PARTS/MILLION	AROCLOR	COMMENTS
AUX-01	4656	<1	—	Oil
AUX-02	4657	200	1254	Soil
AUX-03	4658	22,000	1254	Soil
AUX-04	4659	40	1242	Soil
AUX-05	4660	170	1242	Oil
AUX-06	4661	24,000	1254	Soil
AUX-07	4662	11,000	1242	Soil
AUX-08	4663	23,000	1242	Soil
AUX-09	4664	<1	—	Oil

DATE: 8/19/81

MARK T. CARLSON, CHEMIST
APPLIED CHEMISTRY DIVISION

6621 ELECTRONIC DRIVE, SPRINGFIELD, VIRGINIA 22151 TELEPHONE: (703) 750-3000

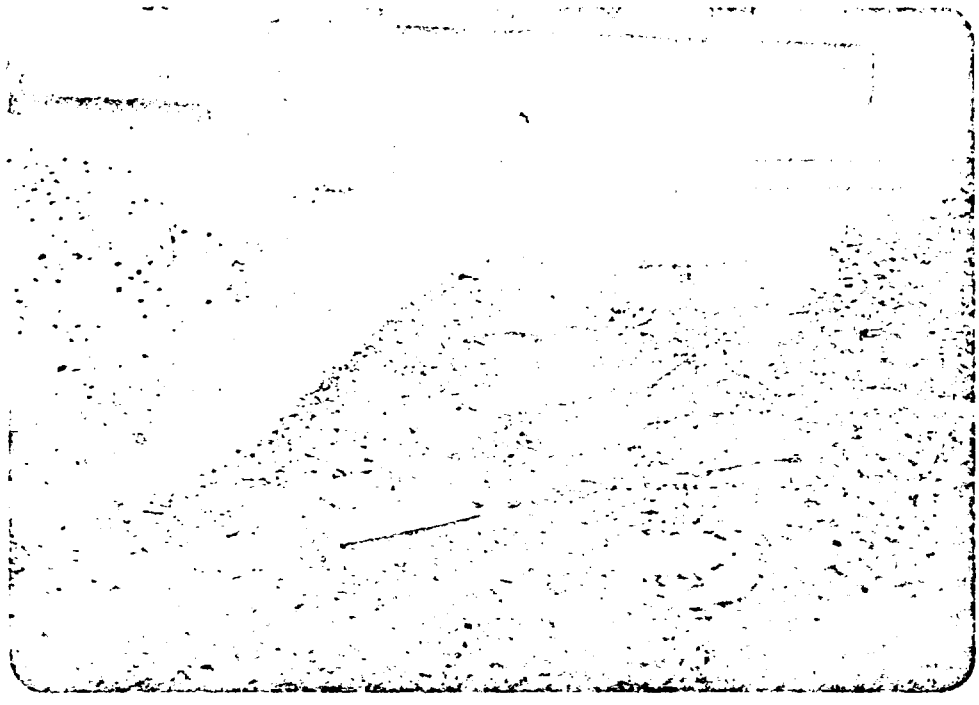
ATTACHMENT B

AEROVOX INDUSTRIES, INC.
740 BELLEVILLE AVENUE
NEW BEDFORD, MASSACHUSETTS 02741

JUNE 18, 1981

1. A view of oil-impregnated soil in culvert 001.
2. A soil sample being collected from NPDES Outfall 001.
3. Another look at culvert 001.
4. The bend in culvert 002 where a soil sample was collected.
5. Soil sample collected from a stained area in backyard substation.
6. Outfall 002, where a soil sample was collected. Notice the black stained area along the sides of the outfall.

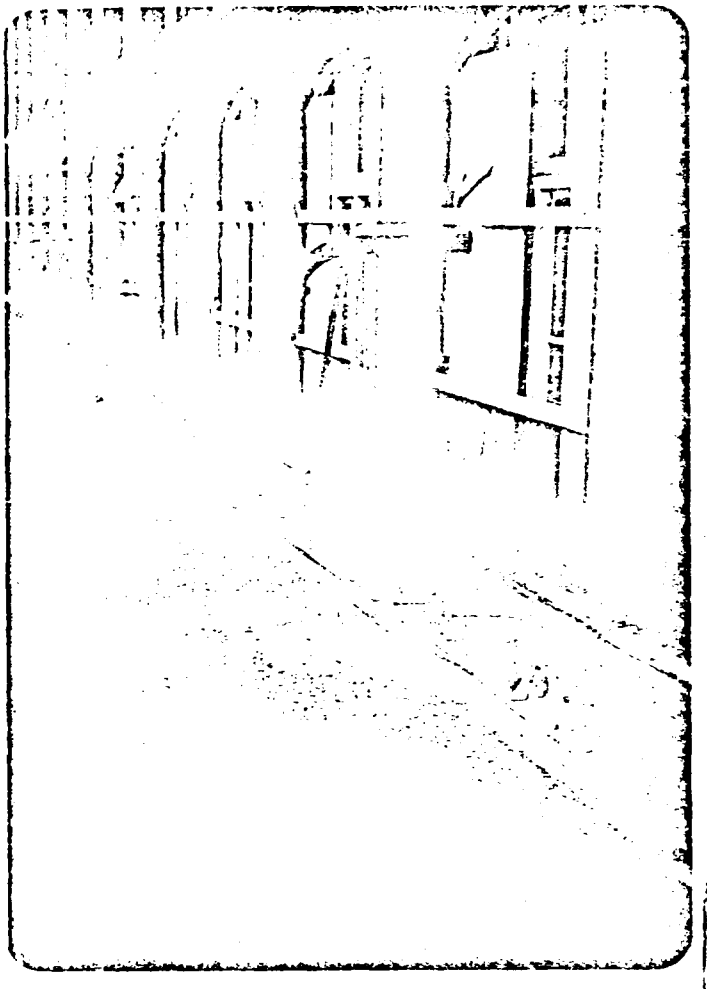
PHOTOGRAPHS
JUNE 18, 1981



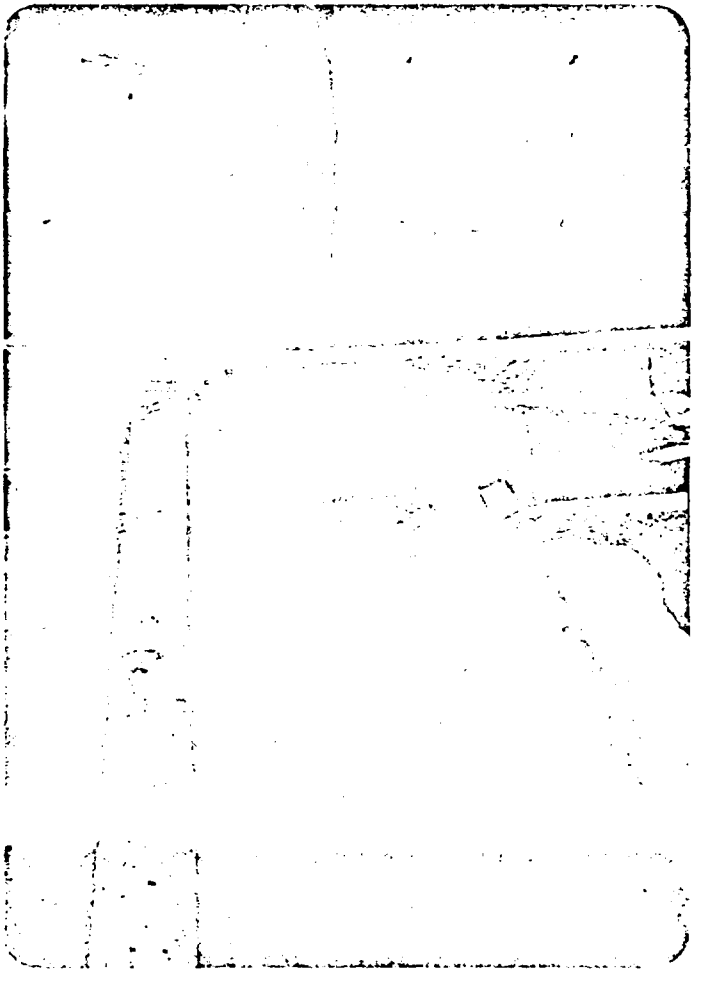
1. A view of oil-impregnated soil in culvert 001.

2. A soil sample [illegible] Outfall 001.

PHOTOGRAPHS
JUNE 18, 1981

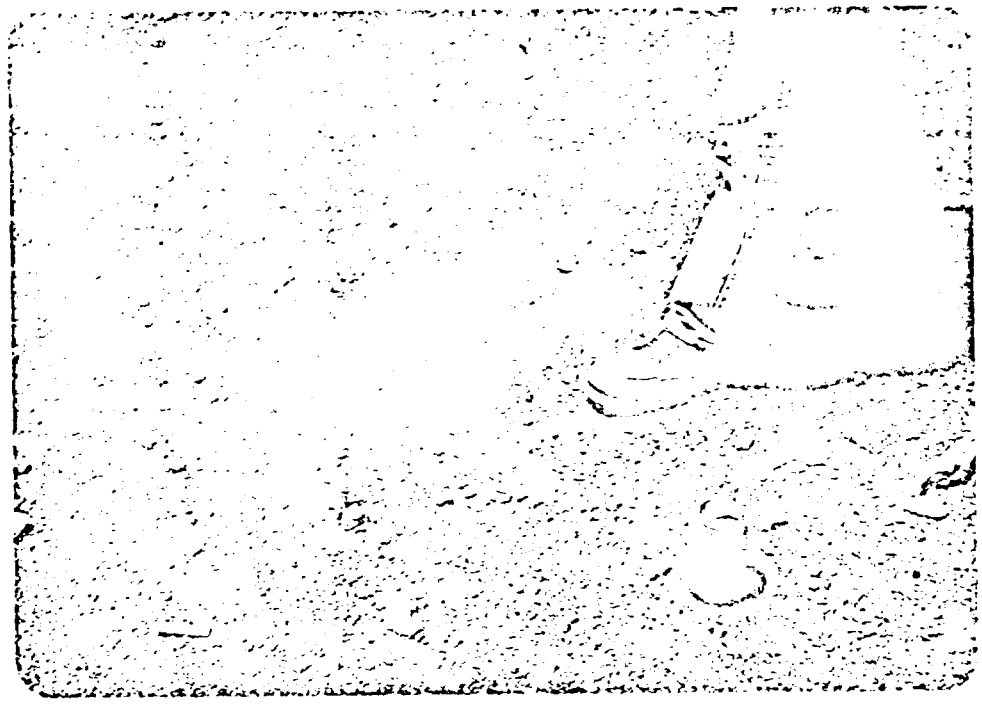


'3. Another look at culvert 001.

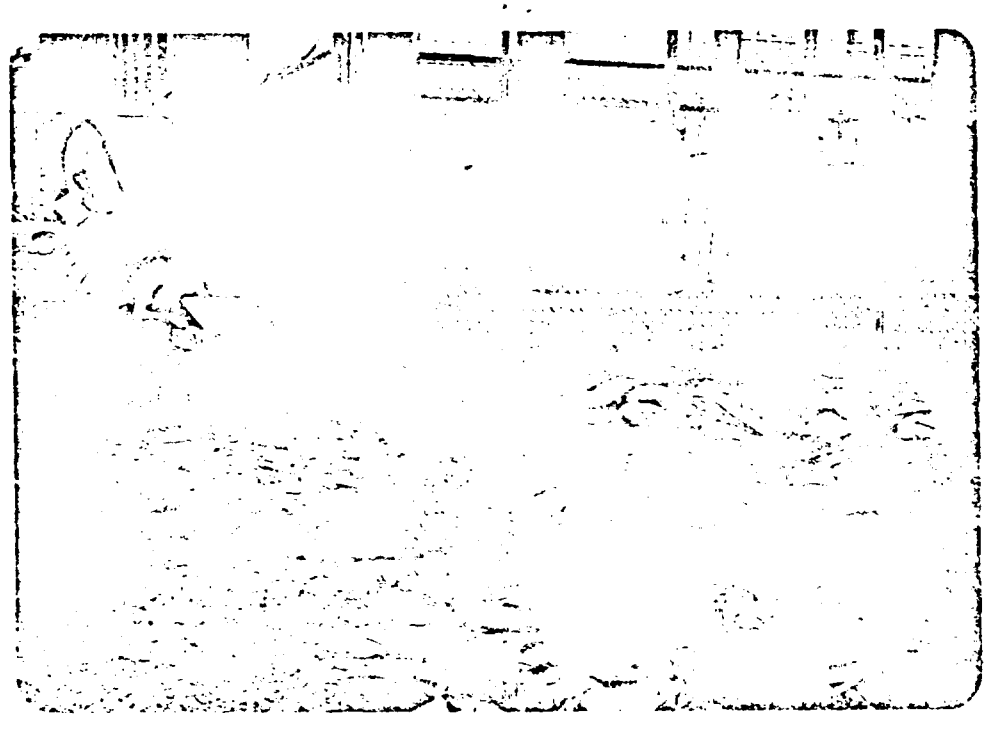


4. The bend in culvert 002 where a soil sample was collected.

PHOTOGRAPHS
JUNE 18, 1981



5. Soil sample collected from a stained area in backyard substation.



6. Outfall 002, where a soil sample was collected. Notice the black stained area along the sides of the outfall.

ATTACHMENT C

United States Environmental Protection Agency

NOTICE OF INSPECTION

Inspector Name and Address: Paul Schiffman, Bob Murphy	Firm Address: Aerovox Inc, 740 Belleville Ave. New Bedford Mass 02741
Inspector's Signature: [signature]	Date: 6/12/81 Time: 9:20 AM
Title: Compliance Auditor	Name and Title of Recipient: Clifford H Tuttle Jr.
	Signature of Recipient: [signature]

REASON FOR INSPECTION

Under the authority of Section 11 of the Toxic Substances Control Act

☒ For the purpose of inspecting (including taking samples, photographs, statements, and other inspection activities) an establishment, facility, or other premises in which chemical substances or mixtures or articles containing same are manufactured, processed or stored, or held before or after their distribution in commerce (including records, files, papers, processes, controls, and facilities) and any conveyance being used to transport chemical substances, mixtures, or articles containing same in connection with their distribution in commerce (including records, files, papers, processes, controls and facilities) bearing on whether the requirements of the Act applicable to the chemical substances, mixtures, or articles within or associated with such premises or conveyance have been compiled with.

☐ In addition, this inspection extends to (circle appropriate letters):

(A) Financial data
(B) Sales data
(C) Pricing data
(D) Personnel data
(E) Reserach data

The nature and extent of inspection of such data specified in A through E above as follows:

ATTACHMENT D

United States Environmental Protection Agency

TSCA INSPECTION CONFIDENTIALITY NOTICE

Inspector Name: Paul Schaffman

Inspector Address: Versar Inc. 6621 Electronic Dr Springfield, Va 22151

Facility: Aerovox Industries Inc

Facility Address: 740 Belleville Ave New Bedford, Mass 02741

Chief Executive Officer of Firm: Clifford H Tuttle Jr.

Title: President

Name of Individual to Whom Notice Given: C.H. Tuttle Jr

Title: Pres

It is possible that EPA will receive public requests for release of the information obtained during inspection of the facility above. Such requests will be handled by EPA in accordance with provisions of the Freedom of Information Act (FOIA), 5 U.S.C. 552; EPA regulations issued thereunder, 40 CFR Part 2; and the Toxic Substances Control Act, Section 14. EPA is required to make inspection data available in response to FOIA requests unless the Administrator of the Agency determines that the data contains information entitled to confidential treatment.

Any or all the information collected by EPA during the inspection may be claimed confidential if it relates to trade secrets or commercial or financial matters that you consider to be confidential. If you make claims of confidentiality, EPA will disclose the information only to the extent, and by means of the procedures, set forth in the regulations (cited above) governing EPA's treatment of confidential information. Among other things, the regulations require that EPA notify you in advance of publicly disclosing any information you have claimed and certified confidential.

To Claim Confidential Information

To claim information confidential, you must certify that each claimed item meets all of the following criteria:

1. Your company has taken measures to protect the confidentiality of the information, and it intends to continue to take such measures.
2. The information is not, and has not been, reasonably obtainable without your company's consent by other persons (other than governmental bodies) by use of legitimate means (other than discovery based on a showing of special need in a judicial or quasi-judicial proceeding).
3. The information is not publicly available elsewhere.
4. Disclosure of the information would cause substantial harm to your company's competitive position.

At the completion of the inspection, you will be given a receipt for all documents, samples, and other materials collected. At that time, you may make claims that some or all of the information is confidential and meets the four criteria listed above.

If you are not authorized by your company to make confidentiality claims, this notice will be sent by certified mail, along with the receipt for documents, samples, and other materials to the Chief Executive Officer of your firm within two days of this date. The Chief Executive Officer must return a statement specifying any information which should receive confidential treatment.

The statement from the Chief Executive Officer should be addressed to:

and mailed by registered, return-receipt-requested mail within seven (7) calendar days of receipt of this Notice.

Failure by your firm to submit a written request that information be treated as confidential, either at the completion of the inspection or by the Chief Executive Officer within the seven-day period, will be treated by EPA as a waiver by your company of any claims for confidentiality regarding the inspection data.

To be completed by facility official receiving this notice

I have received and read this Notice.

Name

Title

Signature

Date

If there is no one on the premises of the facility who is authorized to make business confidentiality claims for the firm, a copy of this Notice and other inspection materials will be sent to the company's chief executive officer. If there is another company official who should also receive this information, please designate below.

Name

Title

Address

ATTACHMENT E

United States Environmental Protection Agency

RECEIPT FOR SAMPLES AND DOCUMENTS

Inspector Name: Robert Murphy	Name of Firm: Aerovox Industries In
Inspector Address: 6621 Electronic Drive Springfield, Va	Firm Address: 740 Belleville Ave New Bedford, Mass 027
	Name of Individual: Norman Cutterworth
	Title: Manager Ind Engineering
Date Collected: 6/18/81	Duplicate Samples Requested and Received: (X) Yes ( ) No
	Sample Numbers: 1-AUX-01 to 1-AUX-09

The documents and samples of chemical substances and/or mixtures described below were collected in connection with the administration and enforcement of the Toxic Substances Control Act.

Receipt for the document(s) and/or sample(s) described is hereby acknowedged:

SAMPLES

ø1 - oil: impregnation tank #3

ø2 : soil: ~~[illegible]~~ culvert ø02 by loading dock

ø3 : sediment : ø02 outfall

ø4 : " : ø01 outfall

ø5 : TCE STILL BOTTOMS - OIL

ø6 - SOIL : BACKYARD SUBSTATION (2)

ø7 - ~~[illegible]~~ SEDIMENT : CULVERT ø01 by fire exit

ø8 - " - CULVERT ø01 downstream

ø9 : OIL - nonreclaimable DOP waste

DOCUMENTS

- 78-79 PCB REPORT
- 79-80 PCB REPORT
- DISPOSAL RECORD
- MEMO TO JEFF MILLER ?

Photographs
Approx 8 of the sampling

Signature of Inspector: [signature] | Signature of Owner, Operator or Agent: [signature]

Title: Compliance Monitor | Title: Mgr. I.E.

[illegible] INC
6621 ELECTRONIC DRIVE
SPRINGFIELD, VIRGINIA 22151

CHAIN OF CUSTODY RECORD

PROJ.	PROJECT NAME
[illegible]	REGION I PCB INSPECTION

SAMPLERS: *(Signature)* [signature] / Robert Murphy [signature]

STA. NO.	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS							REMARKS
BIX	[illegible]	11[illegible]		✓	DOP IMPELL TANK #3	1	Q	I	A	V	X	01	OIL
		1115			CULVERT 002 & SOUTH DOCK							02	SOIL
		1130			DISCHARGE 002							03	SOIL
		1140			DISCHARGE 001							04	SOIL
		11[illegible]			TCE STILL BOTTOMS							05	OIL
		12[illegible]			BACKYARD STAIN							06	SOIL
		1250			CULVERT 002 UPSTREAM							07	SOIL
		1255			CULVERT 002 DOWNSTREAM							08	SOIL
		[illegible]15			WASTE DOP							09	OIL

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*
[signature]	6/23/91 9:35	Mark T. Cockley [signature]			

Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*	Relinquished by: *(Signature)*	Date / Time	Received by: *(Signature)*

Relinquished by: *(Signature)*	Date / Time	Received for Laboratory by: *(Signature)*	Date / Time	Remarks

Distribution: Original Accompanies Shipment; Copy to Coordinator Field Files

ATTACHMENT F

VERSAR Inc.

ANALYTICAL CHEMISTRY DIVISION

CHAIN OF CUSTODY RECORD

SAMPLE # 81 - AUX - 01

LABORATORY # Hoosier

RECEIVED 6/23/81 (DATE) 10 : 00 (HOURS) (MINUTES)

RECEIVED BY Ronald Hutchins (PRINTED) [signature] (SIGNATURE)

PROJECT-TASK # 717.7 - 5 SITE EPA region I

PARAMETER PCB MATRIX oil

Operation	Day/Time		Signature
to lab for sample prep	8-4-81	9:00	E Sabelle
returned to Refr.	8-4-81	12:00	E Sabelle

VERSAR Inc.

ANALYTICAL CHEMISTRY DIVISION

CHAIN OF CUSTODY RECORD

SAMPLE # C1 - AUX - 02

LABORATORY # 4657

RECEIVED 6/23/81 (date) 10 : 00 (hours) (minutes)

RECEIVED BY Beverly Hutchins (print) VEH (signature)

PROJECT-BATCH # 717.7-15 SITE EPA region I

PARAMETER PCB MATRIX Soil

Operation	Day/Time	Signature
Removed from frig, opened 9/14/81		Celeste Mack
took sample, good analysis 9:30-2:00		
prep, returned to frig		

VERSAR Inc.

ANALYTICAL CHEMISTRY DIVISION

CHAIN OF CUSTODY RECORD

SAMPLE # 01-AUX-013

LABORATORY # 4658

RECEIVED 6/23/81 (date) 10 : 00 (hours) (minutes)

RECEIVED BY Beverly Hutchins (print) VEH (signature)

PROJECT-TASK # 717.7-15 SITE EPA region I

PARAMETER PCB MATRIX soil

Operation	Day/Time	Signature
Removed from frig. took sample for analysis prep, returned to frig.	8/4/81 9:30-2:00	[signature]

VERSAR Inc.

ANALYTICAL CHEMISTRY DIVISION

CHAIN OF CUSTODY RECORD

SAMPLE # C1 - AUX - 04

LABORATORY # 46559

RECEIVED 6/23/81 (DATE) 10 : 00 (HOURS) (MINUTES)

RECEIVED BY Ronald Hutchins (PRINT) (SIGNATURE)

PROJECT-TASK # 717.7-15 SITE EPA region I

PARAMETER PCB MATRIX Soil

Operation	Day/Time	Signature
Removed from frig; took sample for analysis prep; returned to frig.	8/4/81 9:30-2:00	

VERSAR Inc.

ANALYTICAL CHEMISTRY DIVISION

CHAIN OF CUSTODY RECORD

SAMPLE # 01 - AUX - 05

LABORATORY # 4660

RECEIVED 10/23/81 (date) 10:00 (hours) (minutes)

RECEIVED BY Ronald Hutchins (print) VRH (signature)

PROJECT-TASK # 717.7-5 SITE EPA Region I

PARAMETER PCB MATRIX oil

Operation	Day/Time	Signature
to lab for sample prep	8-4-71 9:00	E Robitaille
returned to refr	8-4-71 12:00	E Robitaille

VERSAR Inc.

ANALYTICAL CHEMISTRY DIVISION

CHAIN OF CUSTODY RECORD

SAMPLE # 01 - AUX - 06

LABORATORY # 4661

RECEIVED 6/23/81 (DATE) 10 (HOURS) : 00 (MINUTES)

RECEIVED BY Beverly Hutchins (PRINT) [illegible] (SIGNATURE)

PROJECT-BATCH # 717.7 - 5 SITE epa region I

PARAMETER PCB MATRIX Soil

Operation	Day/Time	Signature
Removed from frig; took sample for analysis prep. returned to frig	8/4/81 9:30-2:00	[illegible]

VERSAR INC.

ANALYTICAL CHEMISTRY DIVISION

CHAIN OF CUSTODY RECORD

SAMPLE # C1 - AUX - 07

LABORATORY # 41662

RECEIVED 6/13/91 (DATE) 10 : 00 (HOURS) (MINUTES)

RECEIVED BY Ronald Hutchins (PRINT) ASL (SIGNATURE)

PROJECT-TASK # 717.7-5 SITE EPA region I

PARAMETER PCB MATRIX soil

Comments	Day/Time	Signature
Removed from frig; took samples for analysis prep; returned to frig	6/14/91 9:30-2:00	Ellen March

VERSAR Inc.

ANALYTICAL CHEMISTRY DIVISION

CHAIN OF CUSTODY RECORD

SAMPLE #: C1-AUX-08

LABORATORY #: 4663

RECEIVED 6/23/81 (DATE) 10:00 (HOURS) (MINUTES)

RECEIVED BY Beverly Hutchins (print) [illegible] (signature)

PROJECT-BATCH # 717.7-15 SITE [illegible]

PARAMETER PCB MATRIX Soil

Operation	Day/Time	Signature
Removed from frig; took sample for analysis prep; returned to frig	8/4/81 9:30-2:00	[illegible]

VERSAR Inc.

ANALYTICAL CHEMISTRY DIVISION

CHAIN OF CUSTODY RECORD

SAMPLE # 01-AUX-09

LABORATORY # 4664

RECEIVED 6/22/81 (date) 10:00 (hours) (minutes)

RECEIVED BY Randall Hotaling (print) (signature)

PROJECT-TASK # 717.7-5 SITE EPA region I

PARAMETER PCB MATRIX oil

Operation	Day/Time	Signature
to lab for sample prep	8-4-81 9:00	E Soucille
returned to refr.	8-4-81 12:00	E Soucille

ATTACHMENT 1

Aerovox® INDUSTRIES, INC.

P.O. Box B-970
740 Belleville Ave.
New Bedford, Mass. 02741
617-994-9661

September 29, 1975

Mr. Jeffrey Miller
Director, Enforcement Division
Environmental Protection Agency
John F. Kennedy Federal Building
Boston, Massachusetts 02203

Dear Mr. Miller:

As requested in Mr. Legro's letter of August 16, 1975, we have answered the questions to the best of our ability. In addition, the following information about our company and its use of Polychlorinated Biphenyl (PCB) may provide useful background and perspective.

Aerovox Corporation (now AVX Corporation)was a manufacturer of capacitors for approximately 50 years. In 1938 that company moved from New York City to New Bedford and housed its operation in a former textile mill on the shore of the Acushnet River, which is a tidal estuary at this point. The New Bedford operation manufactured several categories of capacitors including Paper, Paper Oil, Electrolytic and Mica Capacitors. In 1947 it commenced using Aroclor (which contains PCB's) as an impregnating fluid for paper oil capacitors because of the exception stability of this material and insurance company and building code requirements that flammable fluids are not allowed in capacitors used in building. These same qualities are still required to produce a dependable, safe and low cost capacitor. The early Aroclor compounds were not readily biodegradable, while subsequent compositions (including Aroclor 1016 which is currently used) are considerably more benign in this respect.

On January 1, 1973, Aerovox Corporation sold its New Bedford facility to a new group which was, for a brief period of time, known as Belleville Industries, Inc., and subsequently as Aerovox Industries, Inc. The new owners have shown a keen awareness of their environmental responsibilities and have instituted Aroclor containment and incineration procedures. A copy of this Aroclor Handling Procedure is enclosed for your information (See Exhibit A).

All Aroclor utilized at Aerovox Industries is purchased from the Monsanto Industrial Chemicals Co. from January 1, 1973 to date that

usage has averaged in excess of 1,000,000 pounds per year, predominantly of the Aroclor 1016 composition. In addition, relatively small amounts of Aroclor 1254 are used, primarily in the impregnation of capacitors for the Acushnet Capacitor Company and for the manufacture of D.C. capacitors used primarily by the U.S. military. Aroclor 1242 was used during 1971 before the more biodegradable 1016 became available.

The bulk of the Aroclor purchased leaves the plant in sealed metal cans in the form of finished capacitors being shipped to customers. These cans and covers are generally made of .015" steel although a small number are made of aluminum. The cans and covers are roll-sealed together with a cover-sealing compound material, and then impregnated with Aroclor through a small fill-hole. This fill-hole is then sealed with a silicone bung insert, or by soldering. These finished assemblies are subjected to high temperature tests to identify, cull out and reseal any leaking units. As a result, capacitors shipped into the field very seldom leak.

All Aroclor which drips off the units, the impregnation baskets and the degreasing baskets during the manufacturing cycle is caught in drip pans and stored in steel drums and accumulated for incineration. When a quantity in the order of 40,000 pounds is accumulated, it is shipped out by tank-truck to an incineration facility approved by the State of New Jersey. In the past three years, Aerovox sent out an average of more than 100,000 pounds of Aroclor per year for incineration. Prior to this time no Aroclor was sent out from this facility for incineration.

Sealed units that are rejected for various reasons are disposed of in an approved sanitary landfill site in New Bedford by a disposal contractor.

Aroclor also leaves this plant by the discharging (in suspension with cooling and sewage liquids) of extremely small quantities into the Acushnet River and the New Bedford sewer system. These small discharge amounts are unavoidably included in our cooling and sanitary liquid discharges and are in the low parts per billion level when combined with other liquid discharges. Based on analyses of both continuous and grab samples of our cooling water discharge, the amount of PCB's reaching either the Acushnet River or the city sewer system is so small as to be difficult to measure. This is due to the in-plant controls instituted under the enclosed Aroclor Handling Procedure and the increased concern of the new owners and management. All of our analytical work has been done by laboratories either at Monsanto, or at a Monsanto approved independent laboratory (Woodson-Tenent) in

Memphis, Tennessee. In several cases identical samples were analyzed by both laboratories and the parts per billion (PPB) findings were compatible.

The specific answers to your questions are as follows:

1. Not applicable

2. a) Aerovox Industries sole product is capacitors which are used in a wide variety of electrical applications ranging from ballasts used in fluorescent light circuits to atomic energy research. Each capacitor is a closed system that has no inherent means of dispersing impregnating fluids into the environment.

   The physical size of the product ranges from units of approximately 1 cubic inch to units of 5,000 cubic inches. There are also wide variations in capacitance and voltage ratings of the units.

   b) The following table shows the estimated total amounts of Aroclor 1242, 1016 and 1254 which have been incorporated into our product for the years 1971, 1972, 1973, 1974 and for the first 6 months of 1975. This table was compiled from records of Aroclor purchases, capacitor production and the incineration of scrap Aroclor. Because numerous recordkeeping changes preceded and followed the advent of Aerovox Industries on January 1, 1973, it has been necessary to some degree to interpolate and extrapolate from the documents available, making every effort to maintain arithmetic integrity in the process.

SOURCE DERIVATION FOR 2B TABLE

1) Aroclor Purchases - obtained from Purchasing records.

2) Inventory adjustments are based on physical inventories at, or closest to, end of each period. (See attached Exhibit B).

3) Scrapped unit Aroclor weight is based on reject test data for 1973, 1974 and 1975; estimated for years 1971 and 1972. Number of units scrapped is extended by the Aroclor content of representative units in each size category. Aroclor content is obtained from bill-of-material specifications. (See attached Exhibit C illustrating how 1973 figures were obtained).

TABLE 2b

AROCLOR 1242 and 1016

AROCLOR 1242	1971	AROCLOR 1016	1972	1973	1974	Jan-June 1975
Purchases in lbs.	940800.		1662800.	1839800.	2005200.	362700.
Plus (minus) inventory Change	81786.		(54300.)	27960.	(83760.)	90720.
Total lbs. available	1022586.		1608500.	1867760.	1921440.	453420.
Incorporated in capacitors sold	947493.		1473772.2500	1727536.9000	1760955.1611	419437.8525
Contained in capacitors scrapped	20604.		49484.	64725.	82832.	16266.
Collected for incineration	54431.		85193.	75457.	77620.	17706.
Discharged to sewer system	1.6739		1.5648	1.3135	1.1958	.6003
Discharged to river	56.4436		49.1852	39.8800	31.6431	9.5472
Total lbs. accounted for	1022586.		1608500.	1867760.	1921440.	453420.

AROCLOR 1254

Purchases in lbs.	97800.	None	7200.	14400.	None
Plus (minus) inventory Change	(5506.)	5306.	(6513.)	363.	2063.
Total lbs. available	92294.	5306.	687.	14763.	2063.
Incorporated in capacitors sold	87097.7540	5018.4600	505.6147	14086.7478	1961.9537
Contained in capacitors scrapped	276.	6.	37.	74.	18.
Collected for incineration	4915.	281.	28.	602.	80.
Discharged to sewer system	.1511	.0052	.0005	.0092	.0027
Discharged to river	5.0954	.1628	.0148	.2430	.0436
Transferred to ACU-CAP	None	.3700	116.3700	None	None
Total lbs. accounted for	92294.	5305.9980	687.	14763.	2063.

ATTACHMENT 2

PCB SUMMARY SHEET - 7/1/79

(From 7/1/78 to 7/1/79)

Acrovox Inc.
740 Belleville Avenue
New Bedford, Ma. 02741

Acrovox Contact:
Norman Butterworth
Mgr. Environmental Control
Tel. #617-994-9661

ARTICLES IN USE

# TRANSFORMERS IN USE	PCB IN Kg's	# LARGE CAPACITORS IN USE	PCB IN Kg's
5	6477.30	3	20.45

LIQUIDS REMOVED FROM SERVICE, ETC.

REMOVED FROM SERVICE	PLACED INTO STORAGE FOR DISPOSAL	PLACED INTO TRANSPORT FOR EPA APPROVED STORAGE	INCINERATED PER EPA APPROVED FACILITY
32,488 Kg	32,488 Kg	32,488 Kg	--

ATTACHMENT 3

PCB LIQUIDS REMOVED FROM SERVICE

DATE: 7/1/79
Aerovox Inc.
740 Bellville Avenue
New Bedford, Ma. 02741

Aerovox Contact:
Norman Butterworth
Mgr. Environmental Control
Tel. # 617-994-9661

DATE REMOVED FROM SERVICE	QUANTITY IN Kg's	DATE PLACED INTO STORAGE FOR DISPOSAL	QUANTITY IN Kg's	DATE PLACED INTO TRANSPORT FOR EPA APPROVED STORAGE	QUANTITY IN Kg's	PLACED INTO TRANSPORT FOR APPROVED DISPOSAL
11/8/77 to 8/1/78	32,488 Kg	11/8/77 to 8/1/78	32,488 Kg	1/19/79 *	14,375 Kg**	
				1/26/79 *	18,113 Kg**	

* Transported to EPA approved storage facility at:
Recycling Industries
225 Quincy Avenue
Braintree, Ma. 02184
Tel. #617-848-0612

** Note: Aerovox is responsible for incineration, when approved facility is available, and will arrange for pickup at Recycling Industries and transport to approved incineration site.

PCB INVENTORY
ARTICLES IN USE

DATE: 7/1/79
Aerovox Inc.
740 Belleville Avenue
New Bedford, Mass. 02741

LOCATION: Internal & External to Plant (see precise location)

	DESCRIPTION	LOCATION	KG OF PCB's	DATE REMOVED FROM SERVICE	DATE LOCATION OF STORAGE	DATE REMOVED FROM STORAGE FOR DISPOSAL	LOCATION OF DISPOSAL FACILITY	COMMENTS
1.	Westinghouse Power Supply (contains transformer)	Pole 3C18 (internal)	477.3					
2.	25 KV Power Supply (contains 3 lg capacitors.)	Pole 3B19 (internal)	20.45					
3.	Penn. 500 KVA Transformer (#16796-1)	15' east of Plant (external)	1795.5					
4.	Penn. 500 KVA Transformer	15' east of Plant (external)	1795.5					
5.	G.E. 500 KVA Transformer (#5889639)	10' west of Rec'g shed	1204.5					
6.	G.E. 500 KVA Transformer Total (5) transformers and (3) large capacitors)	10' west of Rec'g shed	1204.5					
	Total Kg's of PCB		6497.75					

PCB SUMMARY SHEET - AS OF 7/1/80

(From 7/1/79 to 7/1/80)

AEROVOX INC.
740 Belleville Avenue
New Bedford, Ma. 02741

Aerovox Contact:
Norman Butterworth
Mgr. Environmental Control
Tel. #617-994-9661

ARTICLES IN USE

# TRANSFORMERS IN USE	PCB IN Kg's	# LARGE CAPACITORS IN USE	PCB IN Kg's
4	4681.8	3	20.45

LIQUIDS REMOVED FROM SERVICE, ETC.

REMOVED FROM SERVICE	PLACED INTO STORAGE FOR DISPOSAL	PLACED INTO TRANSPORT FOR EPA APPROVED STORAGE	INCINERATED PER EPA APPROVED FACILITY
	NONE		

ATTACHMENT 4

PCB LIQUIDS REMOVED FROM SERVICE

DATE: 7/1/80
AEROVOX INC.
740 Belleville Avenue
New Bedford, Ma. 02741

Aerovox Contact:
Norman Butterworth
Mgr. Environmental Control
Tel. #617-994-9661

DATE REMOVED FROM SERVICE	QUANTITY IN Kg's	DATE PLACED INTO STORAGE FOR DISPOSAL	QUANTITY IN Kg's	DATE PLACED INTO TRANSPORT FOR EPA APPROVED STORAGE	QUANTITY IN Kg's	PLACED INTO TRANSPORT FOR APPROVED DISPOSAL
NONE						

NOTE: Approximately 1750 kg of PCB were drained from 500 KVA transformer at east end of plant by Three C* Electric Co. and disposed of by them.

We disposed of transformer case in ~~[illegible]~~ Dec. 28, 1979 at Recycling at Newco. (See shipping papers)

* 280 Pleasant St.
Ashland, Mass.

PCB INVENTORY
ARTICLES IN USE

DATE: July 1, 1980
Acrovox Inc.
740 Belleville Avenue
New Bedford, Mass. 02741

LOCATION: Internal & External to Plant (see precise location)

	DESCRIPTION	LOCATION	KG OF PCB's	DATE REMOVED FROM SERVICE	DATE LOCATION OF STORAGE	DATE REMOVED FROM STORAGE FOR DISPOSAL	LOCATION OF DISPOSAL FACILITY	COMMENTS
1.	Westinghouse Power Supply (contains transformer)	Pole 3C18 (internal)	477.3					
2.	25 KV Power Supply (contains 3 lg capacitors.	Pole 3B19 (internal)	20.45					
3.	Penn. 500 KVA Transformer (#16796-1)	15' east of Plant (external)	1795.5					
4.	Penn. 500 KVA Transformer	15' east of Plant (external)		9/14/79		12/79	Recycling Industries	
5.	G.E. 500 KVA Transformer (#5889639)	10' west of Rec'g shed	1204.5	2/15/81 *				
6.	G.E. 500 KVA Transformer Total (5) transformers and (3) large capacitors)	10' west of Rec'g shed	1204.5	2/15/81 *				
	Total Kg's of PCB		4702.25					

* changed to non-PCB fluid on this date.

MR